

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A mobile Internet Protocol (IP) system, comprising:
 - a mobile node initially linked to a first foreign network;
 - a home agent receiving a set of data packets, which are supposed to be transmitted to said mobile node, said home agent being included in a home network of said mobile node;
 - a first foreign agent receiving said packets from said home agent and storing said packets in a first buffer of said first foreign agent, wherein said first foreign agent sends said stored packets to said mobile node if said mobile node continues to be linked to said first foreign network; and
 - a second foreign agent receiving said packets stored in said first buffer of said first foreign agent from said first foreign agent, and the second foreign agent storing said received packets in a second buffer of said second foreign agent if said mobile node is moved to a second foreign network from said first foreign network, the packets stored in the second buffer that are received from the first buffer include packets stored in the first buffer while the mobile node is linked to the first foreign network, said second foreign agent being included in said second foreign network, wherein the first foreign agent keeps storing the data packets being sent from the home agent until the first foreign agent receives a notification message from the mobile

node, and the notification message informs the first foreign agent that the mobile node is not linked to the first foreign agent anymore, and

wherein the packets stored in the first buffer of the first foreign agent are directly sent by the first foreign agent to the second foreign agent.

2. (Original) The mobile IP system of claim 1, wherein said first foreign agent deletes said stored packets after sending said stored packets to said second foreign agent.

3. (Canceled)

4. (Currently Amended) The mobile IP system of claim 1, wherein said ~~first~~second foreign agent deletes said stored packets after sending said stored packets to said mobile node.

5. (Currently Amended) The mobile IP system of claim 1, wherein said first buffer is coupled to said first foreign agent.

6. (Canceled)

7. (Currently Amended) The mobile IP system of claim 1, wherein said first foreign agent determines whether said mobile node is moved to said second foreign network by checking whether ~~[[a]]~~the notification message is received from said mobile node.

8. (Currently Amended) A method of transmitting data in a mobile Internet Protocol (IP) network, the method comprising:

transmitting a set of data packets from a host to a home agent of a mobile node, said mobile node being currently linked to a first foreign network having a first foreign agent;

sending said packets received by said home agent to said first foreign agent and the foreign agent storing the packets in a first buffer of the first foreign agent;

~~the first foreign agent~~ sending the stored packets by the first foreign agent to the mobile node if the mobile node continues to be linked to the first foreign network;

moving said mobile node from the first foreign network to a second foreign network having a second foreign agent;

sending said packets stored in said first buffer by the first foreign agent to said second foreign agent and the second foreign agent storing the received packets in a second buffer ~~of the second foreign agent~~ if said mobile node is moved to the second foreign network from the first foreign network, wherein the packets stored in the second buffer that are received from the first buffer include packets stored in the first buffer while the mobile node is provided in the first foreign network; and

transmitting said packets stored in said second buffer of the second foreign agent to said mobile node,

wherein the first foreign agent keeps storing the data packets being sent from the home agent until the first foreign agent receives a notification message from the mobile node,

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and the notification message informs the first foreign agent that the mobile node is not linked to the first foreign agent anymore, and

wherein the stored packets in the first buffer of the first foreign agent are directly sent by the first foreign agent to the second buffer of the second foreign agent.

9. (Original) The method of claim 8, wherein said first buffer is coupled to said first foreign agent.

10. (Original) The method of claim 8, wherein said second buffer is coupled to said second foreign agent.

11. (Previously Presented) The method of claim 8, further comprising deleting said packets stored in said first buffer after sending said packets stored in said first buffer to said second foreign agent.

12. (Canceled)

13. (Currently Amended) The method of claim 8, further comprising deleting said packets stored in said ~~first~~ second buffer after transmitting said packets stored in said ~~first~~ second buffer to said mobile node.

14. (Canceled)

15. (Currently Amended) A data routing method ~~[[of]]~~at a first foreign agent of a first foreign network in a mobile Internet Protocol (IP) network, the method comprising:

receiving a set of data packets from a home agent and storing them in a first buffer, wherein the data packets are transmitted from a host to the home agent;

determining a mobile node to which said packets are supposed to be transmitted;

storing packets in a first buffer ~~of the first foreign agent in the first foreign network~~ until a notification message is received from the mobile node, wherein the notification message informs the first foreign agent that the mobile node is not linked to the first foreign agent anymore;

~~the first foreign agent~~ sending the stored packets to the mobile node if the mobile node is linked to the first foreign network;

determining if said mobile node moves to a second foreign network having a second foreign agent; and

sending the stored packets to the second foreign agent when the notification message is received from the mobile node,

wherein the second foreign agent receives the packets from the first foreign agent and stores ~~storing~~ the packets in a second buffer ~~at the second foreign agent after the second foreign agent receives the packets and the mobile node has moved from the first foreign~~

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network to the second foreign network, and the second foreign agent transmits the stored packets in the second buffer to the mobile node,

wherein the packets stored in the second buffer that are received from the first buffer include packets stored in the first buffer while the mobile node is in the first foreign network.

16. (Currently Amended) The method of claim 15, further comprising deleting said packets stored in said first buffer after ~~transmitting~~ sending said packets stored in said first buffer to said second foreign agent.

17. (Canceled)

18. (Currently Amended) The method of claim 15, further comprising deleting said packets stored in said ~~first~~ second buffer after transmitting said packets stored in said ~~first~~ second buffer to said mobile node.

19. (Currently Amended) The method of claim 15, wherein said first buffer is coupled to said first foreign agent.

20. (Canceled)

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21. (Currently Amended) The method of claim 15, wherein said determining is performed by checking whether ~~[[a]]the~~ notification message is received from said mobile node.

22. (Currently Amended) The method of claim 15, wherein an IP address of said second foreign agent is included in ~~[[a]]the~~ notification message.

23-36. (Canceled)